

## BACKGROUND AND SUMMARY OF THE INVENTION

Ribbon cables are frequently utilized to direct electrical signals to and from printed circuit boards, and other electrical and electronic devices. In a typical application, a ribbon cable extends to a two-part connector which functions to electrically connect the conductors comprising the ribbon cable to electrical components comprising a printed circuit board or other device. The two-part connector includes a male component which receives the ribbon cable and a female component which is secured to the print circuit board or other device. The female component may be provided with latches which are intended to engage the male component for the purpose of retaining the component parts of the connector in engagement with one another.

In static applications, actuation of the latches may be sufficient to retain the male component of a two-part connector <sup>in</sup> and engagement with the female component thereof. However, in vehicular applications and other applications in which substantial and/or sustained vibration is encountered, the latches have been found to be inadequate to the task of securing the male component of a two-part connector in engagement with the female component thereof. Thus, a need exists for a retaining device which secures

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5 The female component 22 is provided with latches 24 located at the opposite ends thereof. As the male component 12 is engaged with the female component 22 of the two-part connector 10, the latches 24 are pivoted or cammed outwardly. When the male component 12 is fully seated within the female component 22, the latches 24 engage the latch engaging members 18 of the male component 12 to secure the male component into engagement with the female component 22. The latches 24 are adequate to retain the male component 12 in engagement with the female component 22 in static applications of the two-part connector 10, but have been found to be inadequate in circumstances in which the two-part connector 10 is subjected to substantial and/or continuing vibration. Such applications include vehicular applications and similar applications.

20 Figure. 3 further illustrates a retainer clip for ribbon cable connectors 30 comprising the present invention. The retainer clip 30 comprises a unitary structure which may be formed from various metals including steel, stainless steel, aluminum, etc. The retainer clip 30 may also be formed from various plastic materials including polyethylene, polypropylene, polystyrene, etc.

The retainer clip 30 comprises spaced parallel feet 32 which may be provided with retainer toes 34 at the